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ABSTRACT

This booklet stresses the value of science and mathematical studies as a prerequisite for a career in architecture by depicting real women whose careers provide inspirational role models. The first section is a text designed for use by elementary students and presents the career of Architect from a woman's point of view. Both female and male students are encouraged to view architecture as a potential career choice. The second section provides the teacher with three lesson plans for classroom use. The lesson plans are aimed at exploring: (1) the function of three-dimensional design in architecture; (2) floor plans; and (3) how an architect plans. Each lesson format includes a purpose or objective, materials, procedures, and conclusions. (MM)

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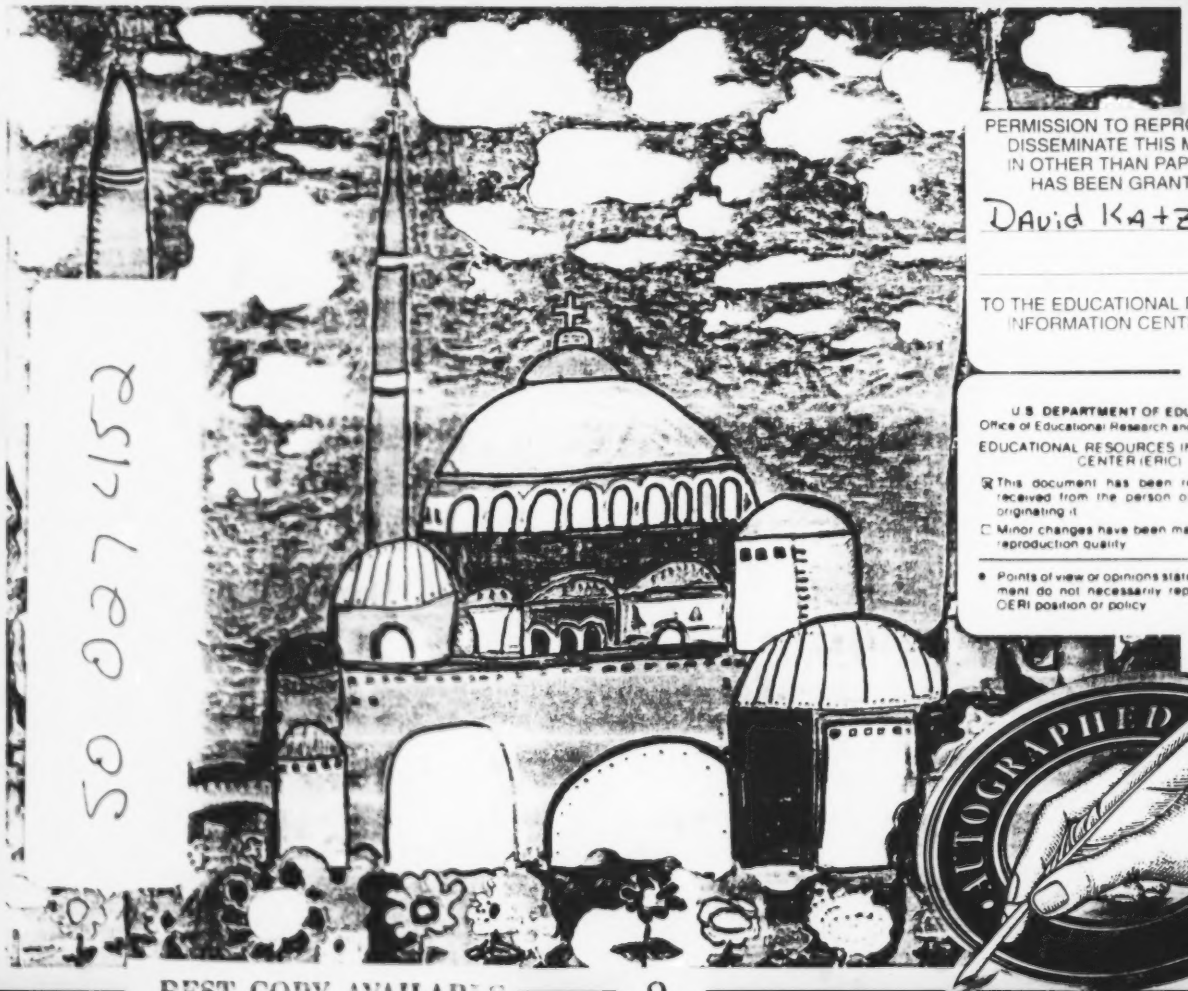
YOU CAN BE A WOMAN ARCHITECT



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Margot Siegel and Judith Love Cohen Art: David Katz

YOU CAN BE A WOMAN ARCHITECT

Judith ♡ Cohen

Margot Siegel
and
Judith Love Cohen

Illustrations
David A. Katz

Editing
Janice J. Martin

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Third Printing Summer 1994
You Can Be a Woman Architect was written by Margot Siegel and Judith Love Cohen, designed and illustrated by David Katz and edited by Janice Martin. Printed by Gemini Graphics.

This book is one of a series that stresses the value of science and mathematical studies by depicting real women whose careers provide inspirational role models. Other books in the series include:
You Can Be A Woman Engineer
You Can Be A Woman Marine Biologist
You Can Be A Woman Zoologist
You Can Be A Woman Egyptologist
You Can Be A Woman Paleontologist
You Can Be A Woman Oceanographer

Publication Data
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Siegel, Margot and Cohen, Judith Love
You Can Be a Woman Architect
Summary: What a career in architecture is like from a woman's point of view. Nonfiction.

1

Dedication

This book is dedicated to Rosalind Cohen, the first curator for architecture at the Museum of Modern Art in New York.

2

The sounds are awesome: the roar of the earth mover's engines, the metallic crash as the mouth of the derrick digs into the unyielding earth, and finally, growls of machines moving tons of dirt. The construction has begun, and Margot Siegel is moving into the final phase of her job as architect overseeing the building contractor.

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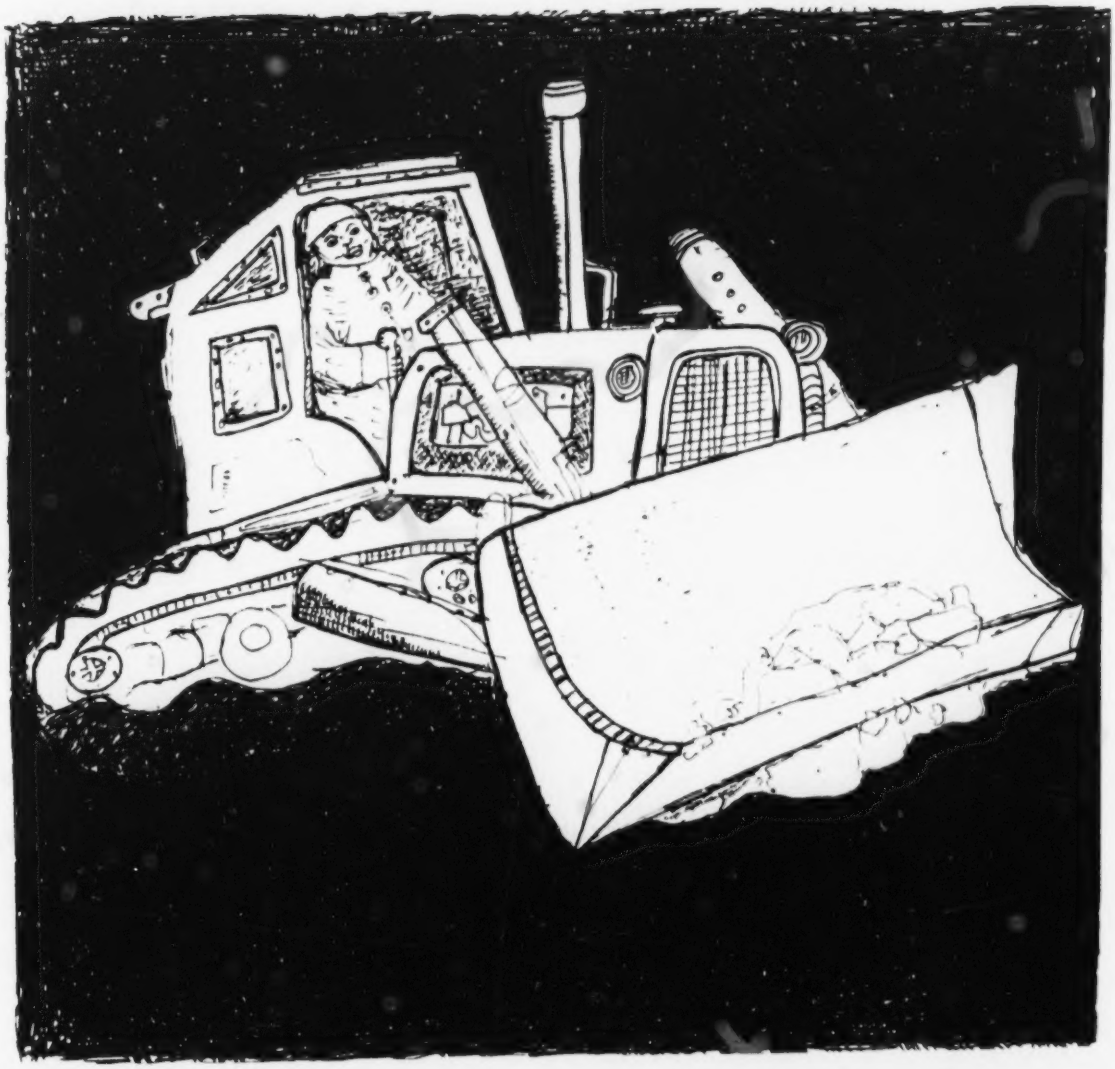

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In a few months (or sometimes years), there will be a neat, clean dedication ceremony. Margot will hold up a picture and may even receive a plaque from the mayor or the school board or the airport commission. Everything will be new and shiny and complete, and the users will move in. And Margot will again feel the sense of excitement and satisfaction that only meeting the challenge of a new project and seeing it used can give her. This is Margot Siegel's story.

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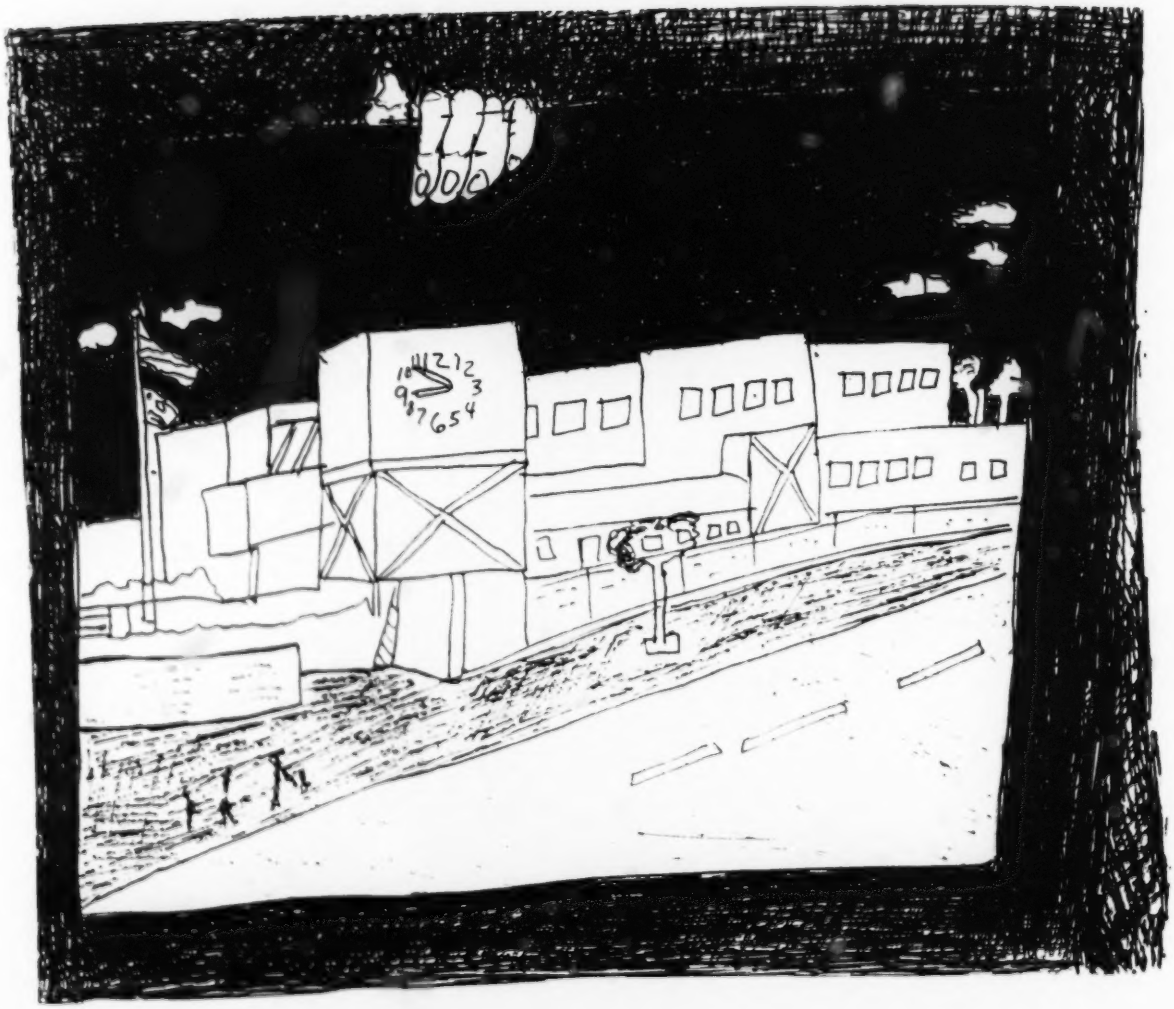

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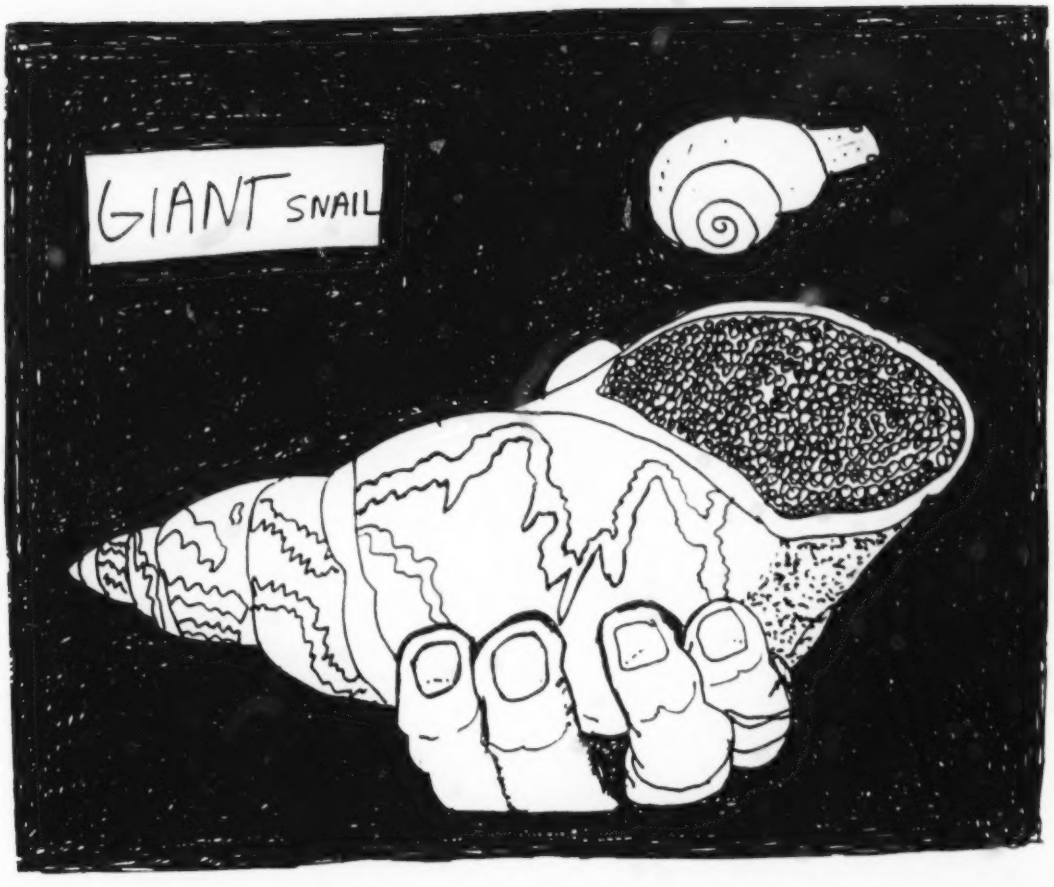
When I was a little girl I loved to play in the sand. I studied the snails--the colors and patterns of their shells. And I built sand castles. I was always building and making things.



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I was very physical. I swam, skied and climbed trees. I grew up in Europe, and girls were supposed to be ladies; but I loved to explore, and yes, to see what the view was like from high in the trees.

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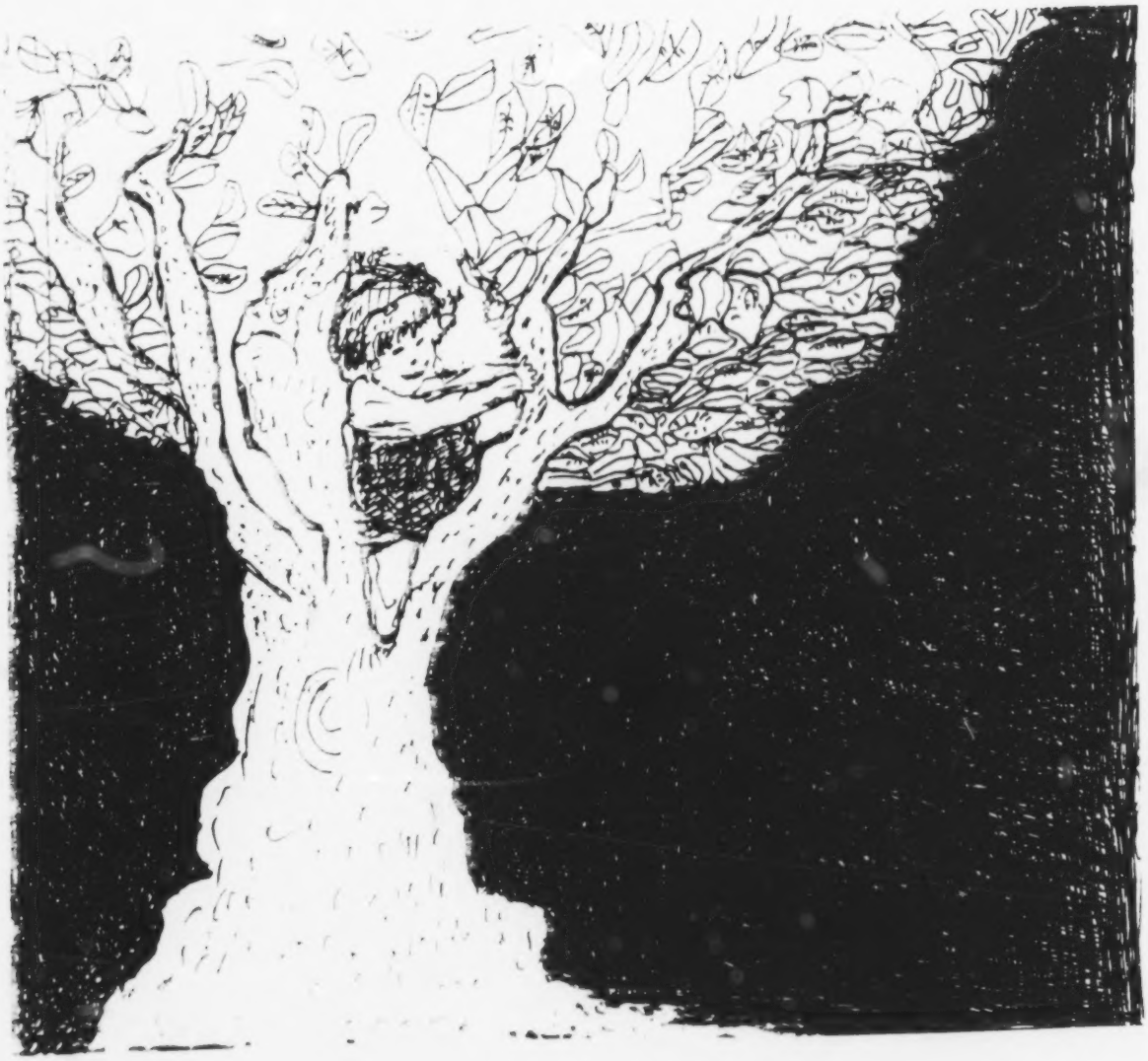

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I thought about being an artist--a sculptor. I loved working in clay. This type of art was a very private thing, an experience between me and my creation! It was a wonderful feeling... but maybe it was too much of a luxury, too comfortable.

11

15

12

I also wanted to do something useful, something to help other people. It was a problem . . . and then I discovered architecture.

It was three-dimensional, a sculpture on a larger scale. It was great!

And I could make a living doing it!

And I could see it built. In public! I could point to it. That's my building!

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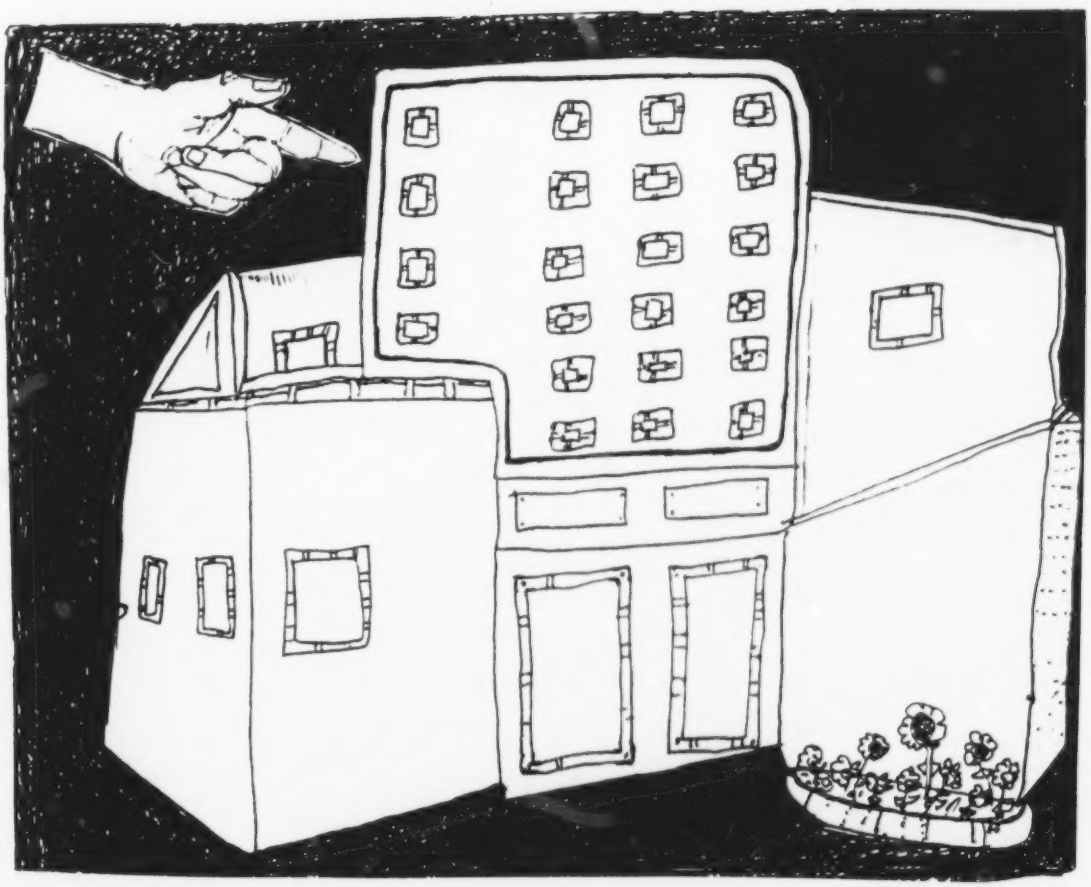

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First, I studied the history of art and architecture.

I learned that you can tell what is important to people by the kind of building they value.

Ancient Egypt--tombs of Pharaohs

Ancient Greece--temples of worship

Medieval Europe--Gothic cathedrals, towers

Modern America--skyscrapers, banks, corporate headquarters, airports

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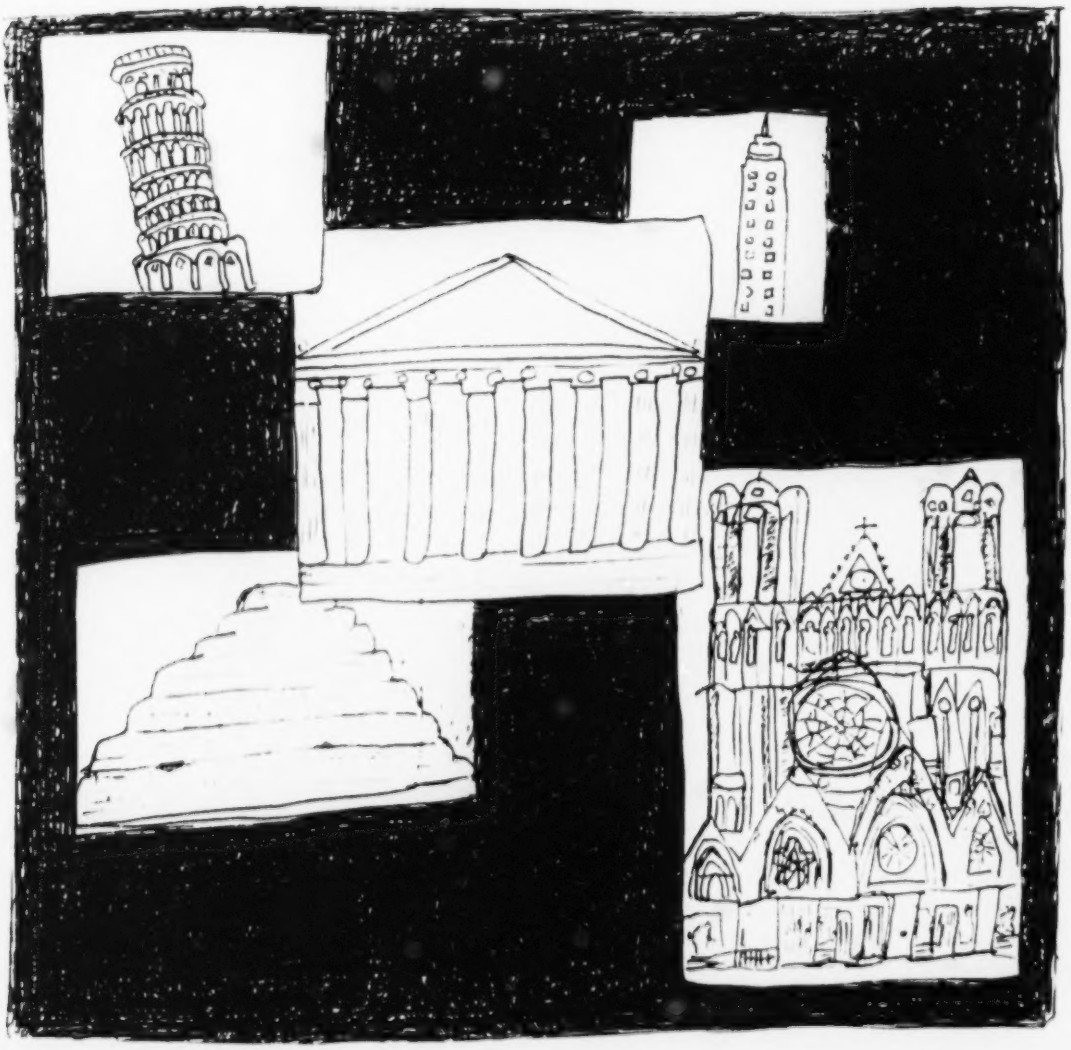

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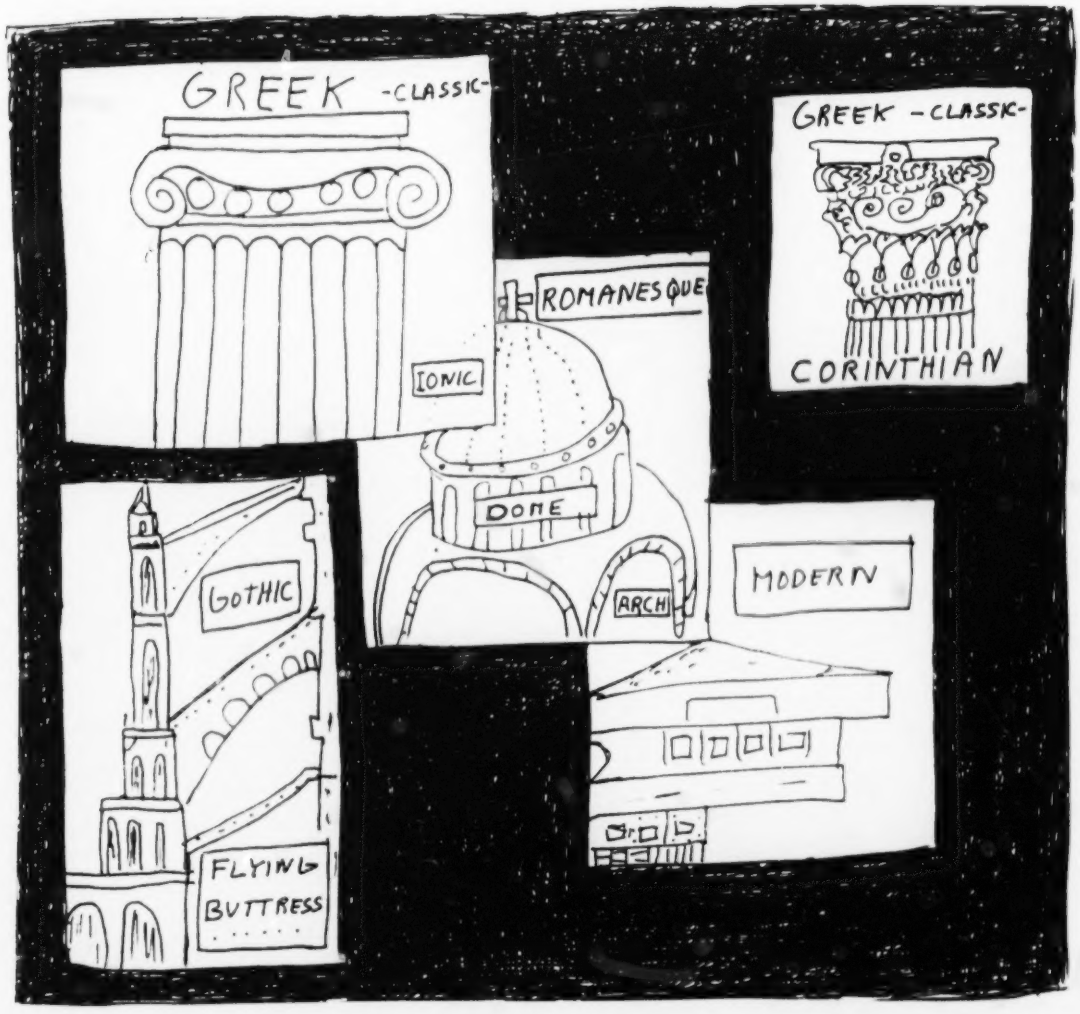
I learned about different styles and materials:

Greek classic style like the Lincoln Memorial in Washington D.C. with its large, elegant white marble columns;

Gothic style like St. Patrick's Cathedral in New York with its flying buttresses;

Romanesque style like Santa Sophia (originally a church, later a mosque, now a museum) in Turkey with its round domes and archways;

Modern style like the California beach-front condominiums with their glass walls.


GREEK -CLASSIC-
IONIC
GREEK -CLASSIC-
CORINTHIAN
ROMANESQUE
DOME
ARCH
GOTHIC
FLYING BUTTRESS
MODERN

18

Now that I knew what architecture was, I had to learn how to do it.

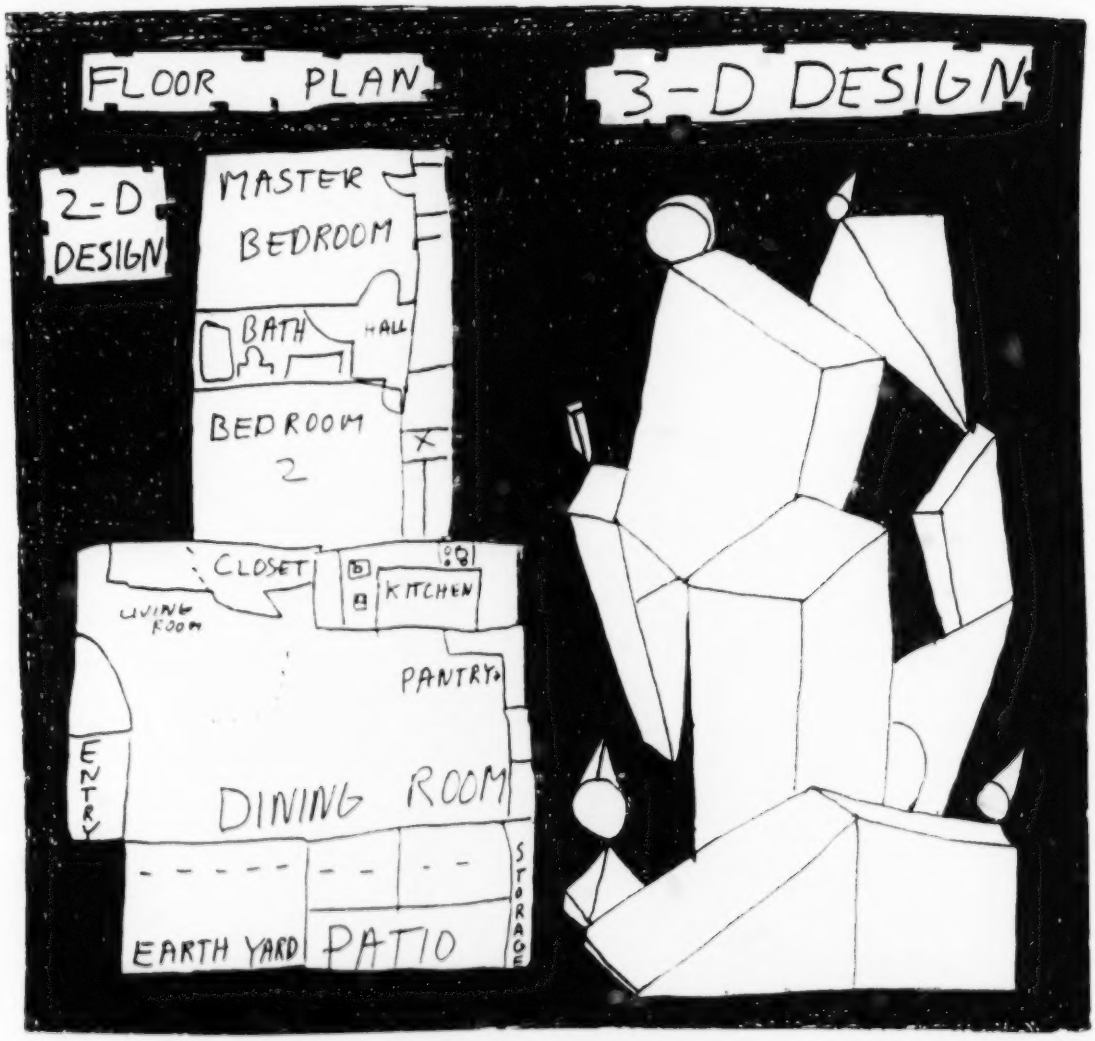
I learned about design:

Two-dimensional design--layouts of floor plans, blue-prints;

Three-dimensional design--like a cube or a wedding cake or a spiral staircase.

I learned to use the two-dimensional design to figure out how to best use the space--like putting a refrigerator near a stove, or offices of people who work together close to each other.

I learned to use the three-dimensional design to work out the masses or building blocks--like putting the wings of a building together in some pleasing way, or arranging a base (bottom part) and a tower in an interesting way.



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20

Then I studied the math, physics and engineering parts of architecture:

Structures and materials

Plumbing

Air-conditioning

Electrical wiring

Landscaping

How big an air conditioner do we need for a building with ten rooms?

Can we keep the one-hundred-year-old trees and still have room for the building foundation?

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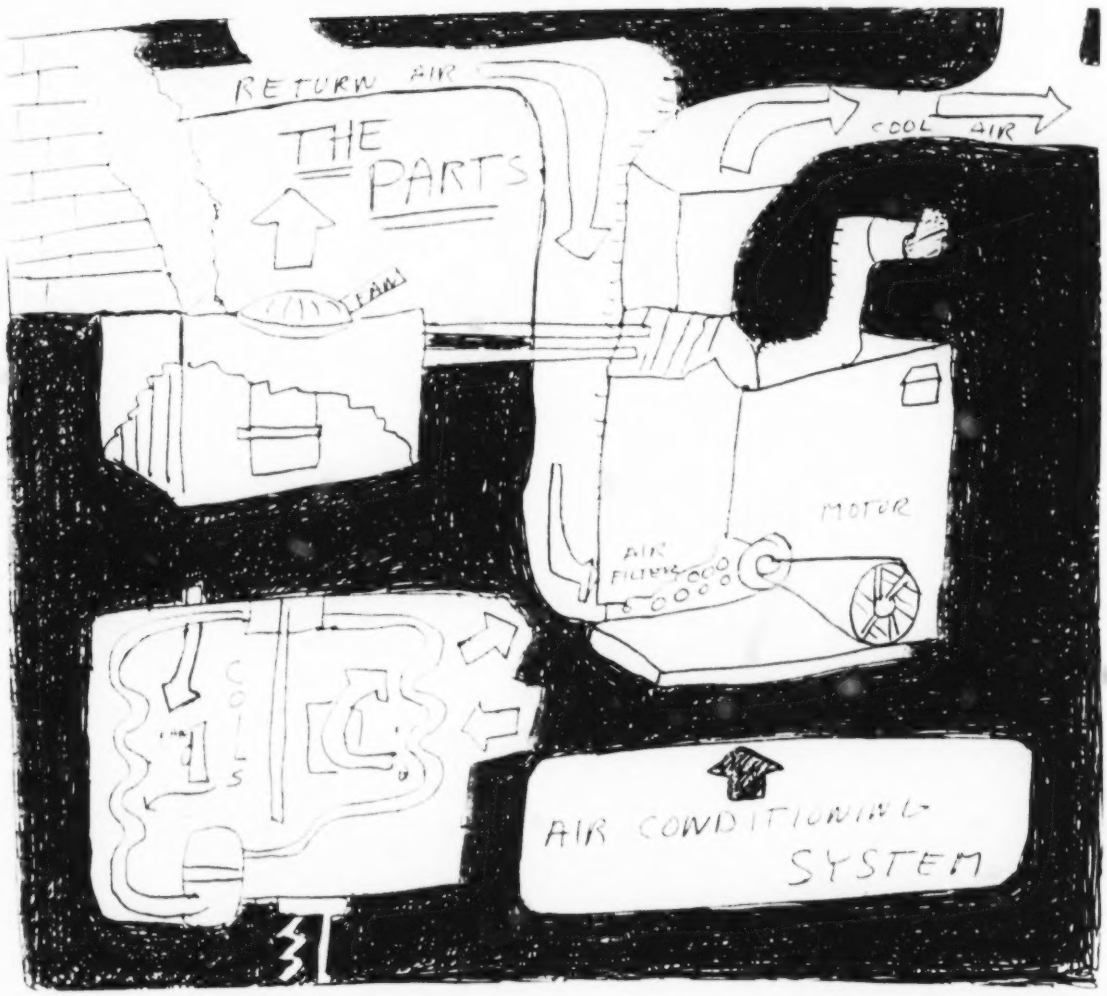
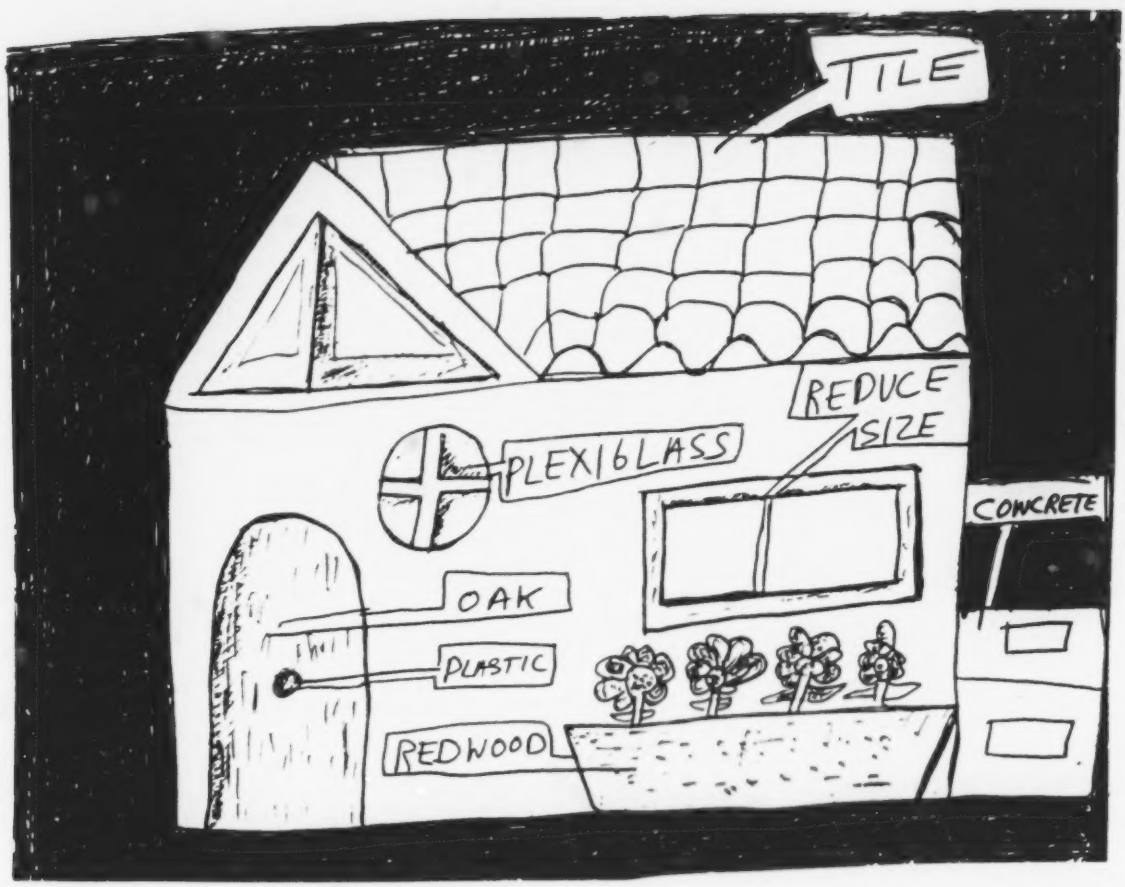

RETURN AIR
THE PARTS
COOL AIR
TEARS
MOTOR
AIR FILTER
COILS
AIR CONDITIONING SYSTEM

22

And then I was an architect!

In my practice the most important thing is to talk to my clients--be a detective--discover their true needs. Should the building be impressive or modest? What constraints? What size? What materials? What is the site like (slope, trees, sun)?


TILE
REDUCE SIZE
PLEXIGLASS
CONCRETE
OAK
PLASTIC
REDWOOD

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I start with the function--what is the building going to be used for? The shape grows out of that.

Form Follows Function

Three examples:

#1. A Los Angeles light-rail station

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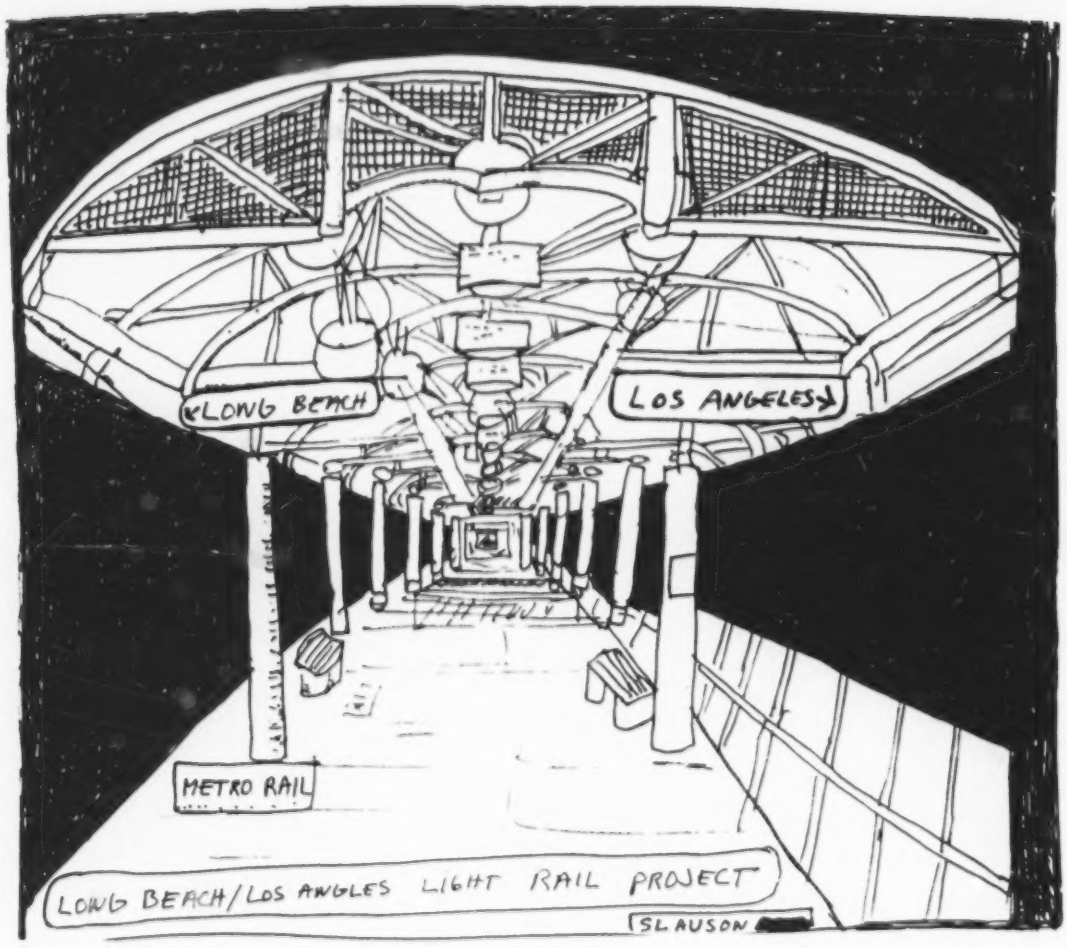
LONG BEACH
LOS ANGELES
METRO RAIL
LONG BEACH/LOS ANGLES LIGHT RAIL PROJECT
SLAUSON

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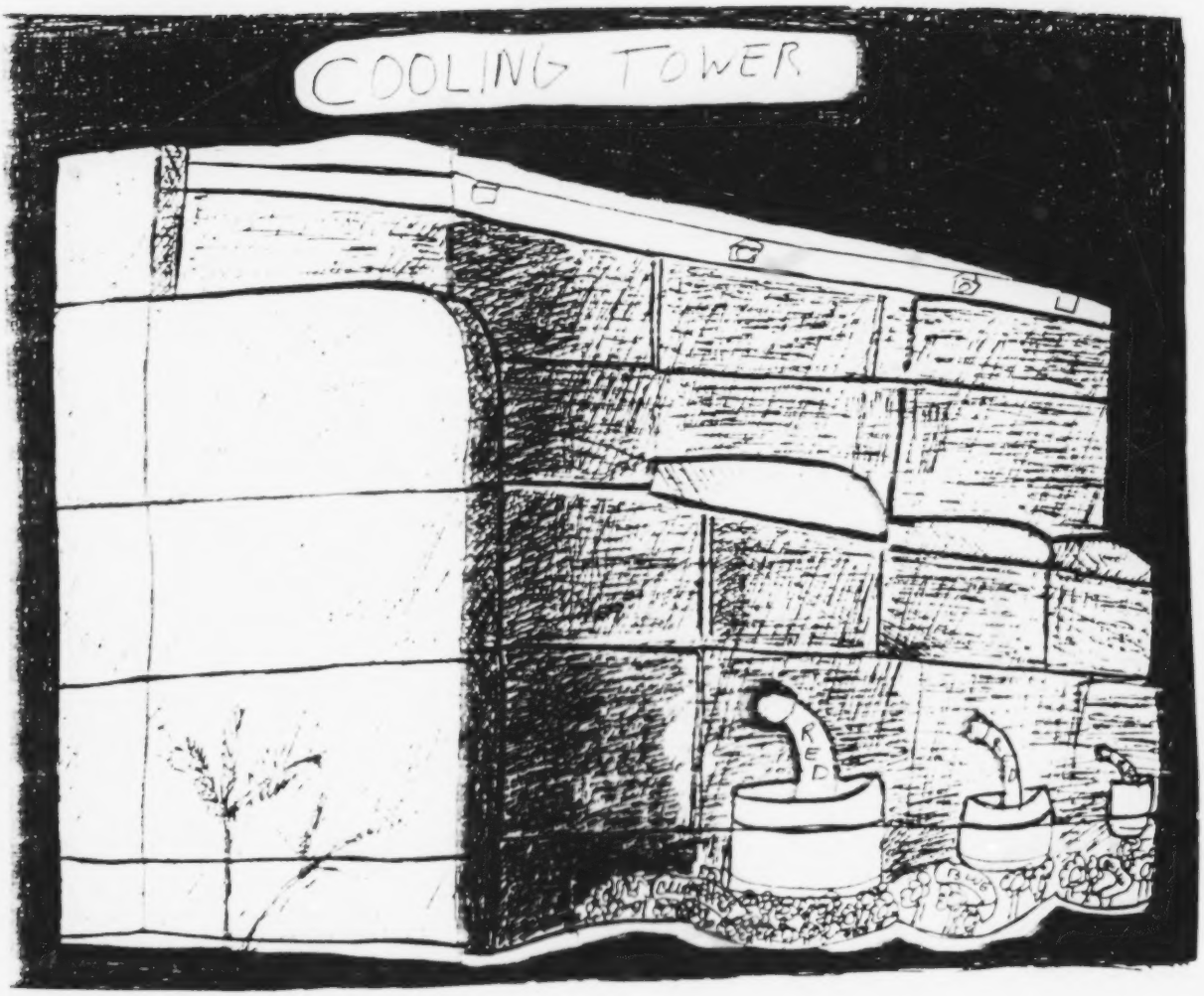
#2. An airport cooling tower. This was an industrial building, not a building for people to live in or work in, so I made it a large textured-concrete box with the incoming hot water pipes painted red and the out-going cool water pipes painted blue.



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#3. A child-care center--for use by young children who need room to play and sturdy equipment.

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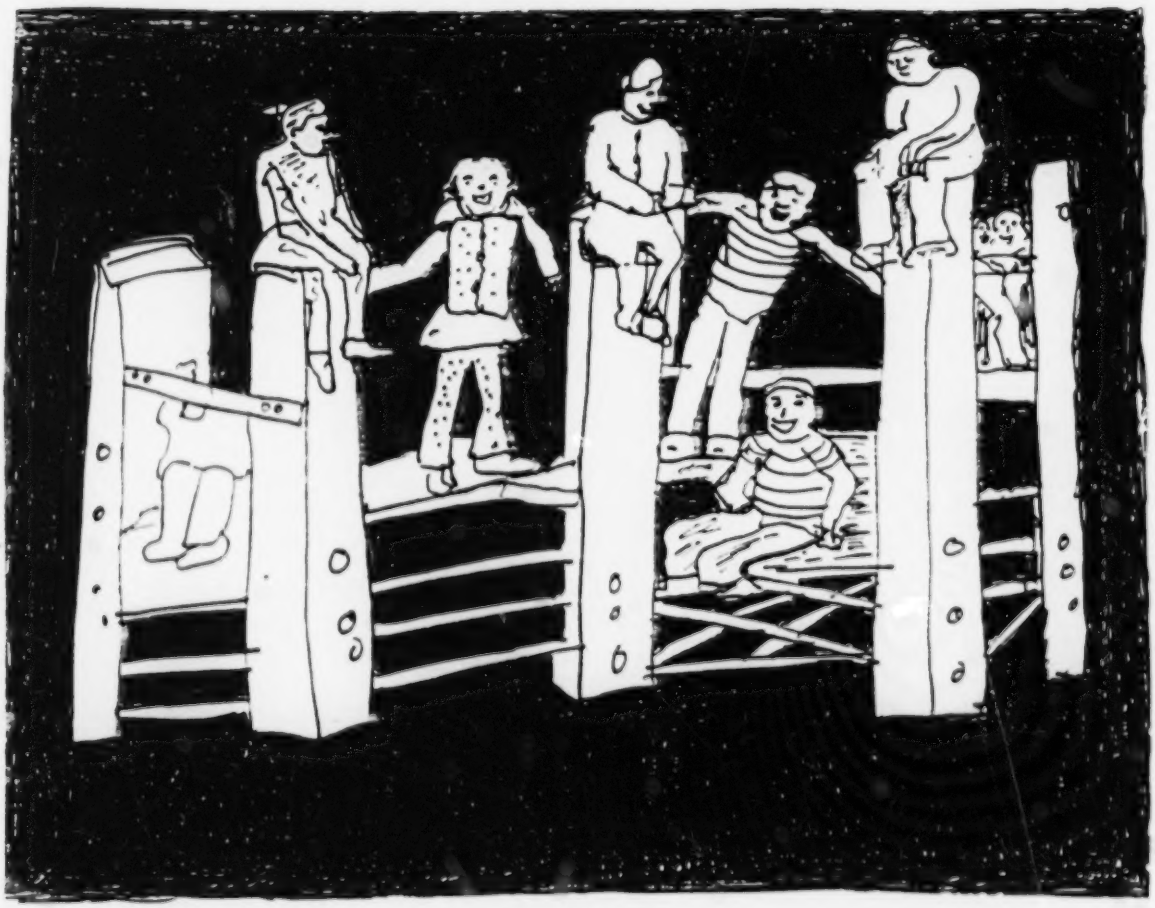

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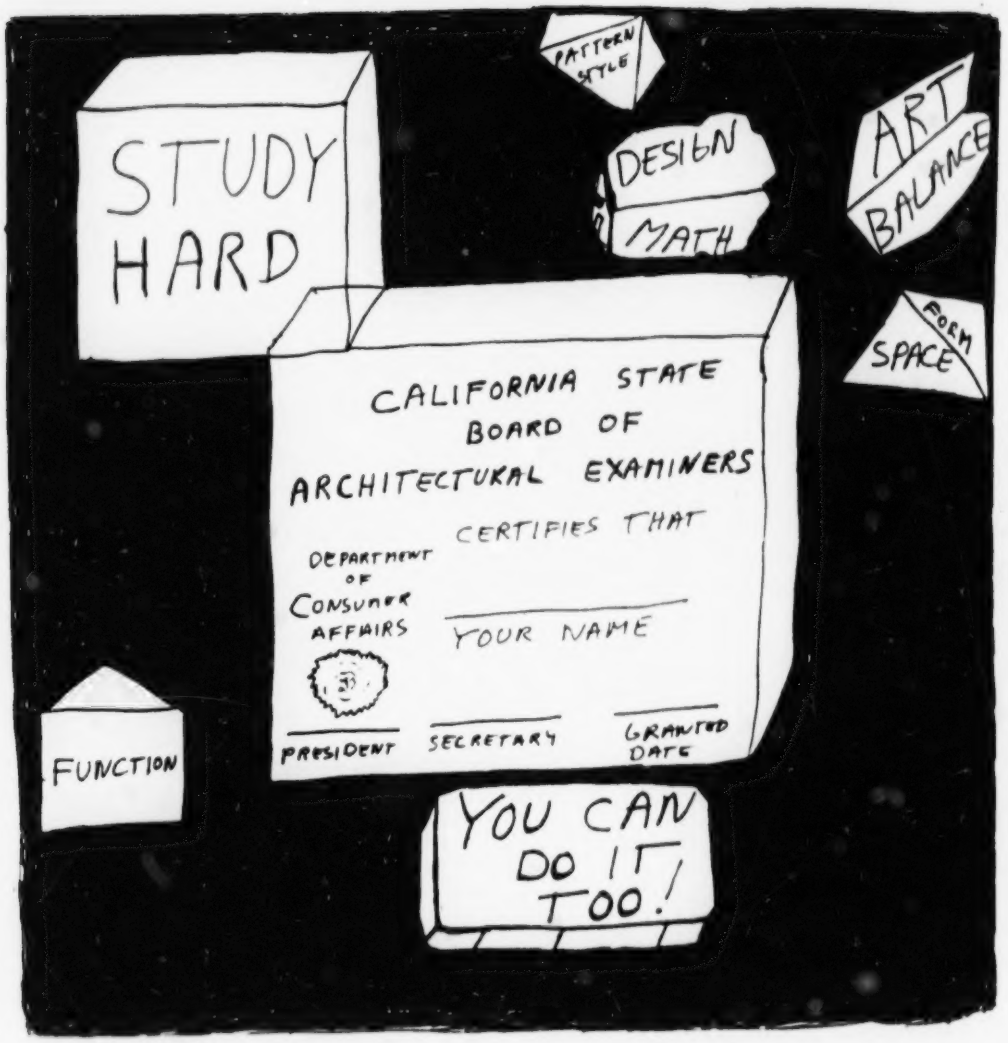
The high point of my career was getting my architect's license. After five years at Pratt Institute, I worked as an apprentice in a firm with other architects, and then I took a series of written and spoken exams.



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Today I am a partner in an architectural firm. We are working on many projects. We take them from initial design to finished building (from beginning to end).

While we are developing the concept for one client, we are doing engineering drawings for another, then getting government agencies to review a third project, getting prices for a fourth project, and going out to oversee the construction of a fifth project.

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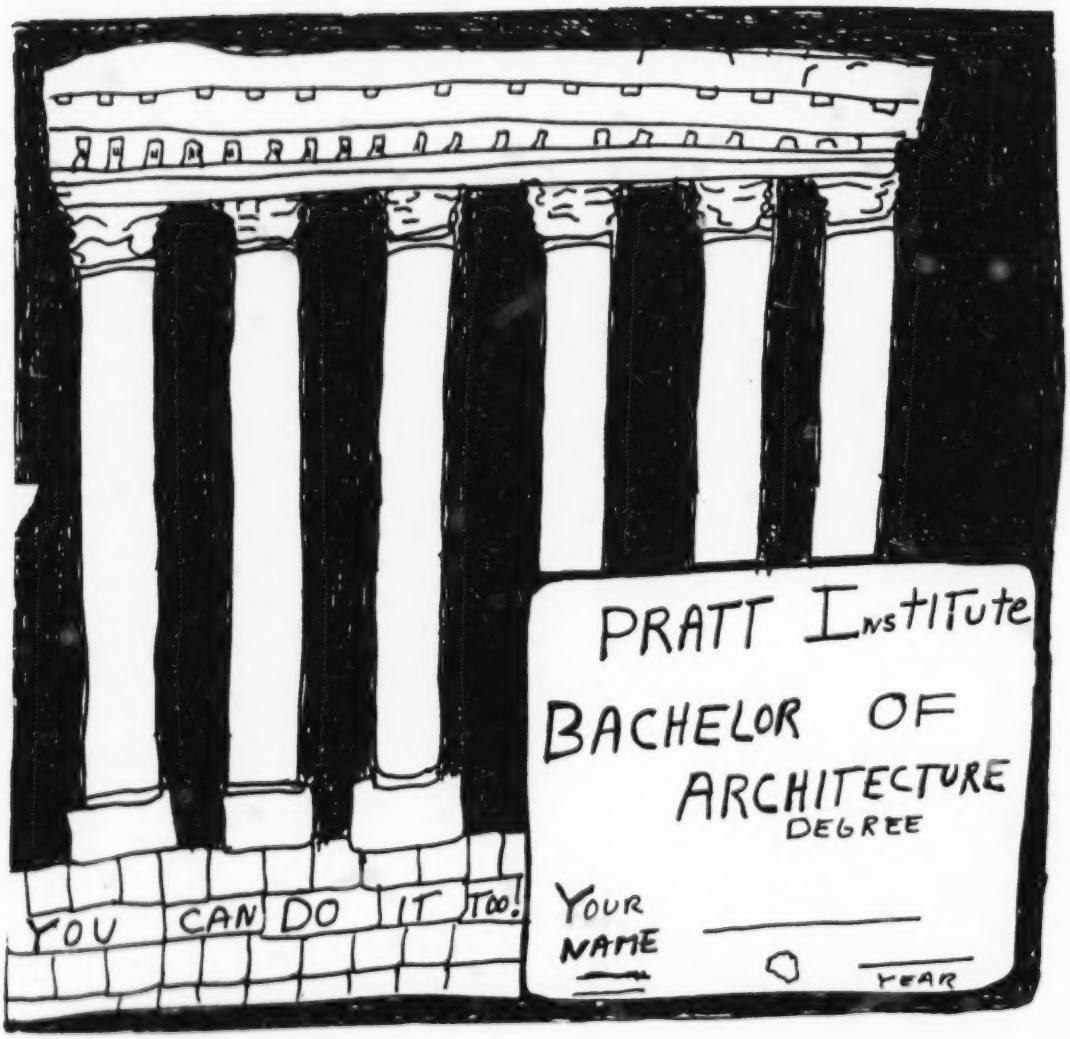
Do you like to draw? Do you like to make things? Can you visualize three-dimensionally? Do you like to work with people? Then you can do it too. You can be a woman architect!

35


PRATT INSTITUTE
BACHELOR OF ARCHITECTURE DEGREE
YOUR NAME
YEAR
YOU CAN DO IT TOO!

YOU CAN BE A WOMAN ARCHITECT

ARCHITECTURAL LESSON PLAN 1

PURPOSE:	To give an awareness of what three-dimensional design (form, negative space, scale, rhythms and patterns) is in architecture.
MATERIALS:	Construction paper, scissors, glue.
PROCEDURES:	Have children create castles. Emphasize towers, moats, stairs and other details.
CONCLUSIONS:	How is your castle like the ones in the picture books?
	How is it different?
	Imagine walking through the castle. How do you experience the space (windows, light, feelings)?
	What were some of the materials used?
	Measure your castle. How big is it in length and width?

ARCHITECTURAL LESSON PLAN 2

PURPOSE:	Provide a better understanding of what floor plans are.
MATERIALS:	Pen and paper, yardstick or tape measure.

PROCEDURES: Have students close their eyes and visualize their house as it is now. Have them draw each room in the house. Have them guess how big each room is. As a variation on this have them design the size and location of each room. Have them call it their fantasy house.

Compare the size of your school with your house. Measure your classroom.

CONCLUSIONS: How big is your living room?

How big is your classroom?

How many classrooms would fit into the auditorium?

ARCHITECTURAL LESSON PLAN 3

PURPOSE: To provide a better look at how an architect plans.

MATERIALS: Construction paper, scissors, cardboard, paint.

PROCEDURE: Have each member of the class choose a building from his or her community to model. Then have each of them create the model of the building. Agree on a scale for all to use. Start with a community building that is very familiar, maybe a school, a bank or a grocery store.

CONCLUSIONS: What do you like about the building you modeled? What do you like about the buildings in your neighborhood?

What would you improve if you were designing it?

About the Authors:

Margot Siegel is licensed to practice as an architect by the states of California and New York and by the National Council of Architectural Registration Boards. She received her bachelor of architecture from Pratt Institute. She is active in various civic, professional and business organizations. She has held offices in the American Institute of Architects and is a Transportation Commissioner for the City of West Hollywood and a commissioner on the Los Angeles County Citizens' Planning Council. She is a founding member of Siegel Diamond Architects, one of the nation's largest female-owned architectural companies. She has concentrated on public service buildings such as child care centers, transportation projects, and school district projects. Her hobbies include skin-diving, skiing and watching hummingbirds.

Judith Love Cohen is a Registered Professional Electrical Engineer with bachelor's and master's degrees in engineering from the University of Southern California and University of California at Los Angeles. She has written plays, screenplays, and newspaper articles in addition to her series of children's books that began with "You Can Be a Woman Engineer."

About the Illustrator:

David Arthur Katz received his training in art education and holds a master's degree from the University of South Florida. He is a credentialed teacher in the Los Angeles Unified School District. His involvement in the arts has included animations, illustrations, and play-, poetry- and song-writing.

Cascade Pass, Inc.

"Beyond the obvious importance of encouraging little girls to dream big dreams by providing them with role models, this book provides an amazingly in-depth look at the range of skills that it takes to be an architect. It it therefore a wonderful tool for opening up the world of architecture for girls and boys alike." *Katherine Diamond, AIA Past President of the Los Angeles chapter of the American Institute of Architects.*

This book is one of a series that emphasizes the value of science and mathematical studies by depicting real women whose careers provide inspirational role models. Other books in the series include:

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